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ABSTRACT

The present invention relates to monoclonal antibody 1A7. This is an anti-idiotypic
produced by immunizing with an antibody specific for ganglioside GD2, and identifying a
5 hybridoma secreting antibody with immunogenic potential in a multi-step screening process.
Also disclosed are polynucleotide and polypeptide derivatives based on 1A7, including single
chain variable region molecules and fusion proteins, and various pharmaceutical
compositions. When administered to an individual, the 1A7 antibody overcomes immune
tolerance and induces an immune response against GD2, which comprises a combination of
10 anti-GD2 antibody and GD2-specific T cells. The invention further provides methods for
treating a disease associated with altered GD2 expression, particularly melanoma,
neuroblastoma, glioma, soft tissue sarcoma, and small cell carcinoma. Patients who are in
remission as a result of traditional modes of cancer therapy may be treated with a
composition of this invention in hopes of reducing the risk of recurrence.

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